REMARKS

This paper is in response to the Office Action of December 9, 2004. The due date for response extends to March 9, 2005.

Summary: By this Amendment and Response, claim 9 has been amended to refer to the wafer having a wafer configuration and to the platen as having a main surface having a configuration corresponding to that of the wafer; remarks are made to the effect that the amendment to claim 9 avoids the rejection of claims 9-17 based on 35 USC Paragraphs 1 and 2; and claim 16 has been amended to correctly be dependent on claim 15. Also, remarks are made in support of requested reconsideration of the rejection of claims 1-17 based on 35 USC Paragraphs 1 and 2.

Response To Paragraphs 2, 4 and 5: Claims 1-17 have been rejected on two grounds, namely each of paragraphs 1 and 2 of 35 USC 112. The basis for the rejections as to both paragraphs is an assertion that "a disk-like configuration...can be interpreted to have other shapes beside circular shape", coupled with a statement that "Disk-like configuration can be other shapes such as oval, triangle, square, or rectangular that is not supported by the original disclosure." However, there was no indication in the rejections that the "can be" interpretation, or the "can be other shapes" assertion, is based on the "ordinary meaning" of a wafer that has a "disk-like configuration". Further, there was no evidentiary support for such interpretation or assertion.

It is respectfully submitted that these above-quoted statements are not a proper basis on which to reject claims 1-17. First, claim terms should be given their ordinary meaning in the field of the invention, unless examination of the specification or prosecution history, for example, indicates that the inventor used the term with a special meaning. See for example, Pall Corp. v. Hemasure Inc., 181 F. 3rd 1305 (Fed. Cir. 1999). Further, dictionaries may be used to determine what is the plain meaning of a term used in the written description.

In the following remarks it is shown that in this Application, with respect to the platen:

(a) the inventors used the term "disk-like configuration" with a special meaning,

(b) such special meaning is clearly related to a "disk-like configuration" of a wafer, and

(c) the "disk-like configuration" of the wafer has an ordinary meaning in the field of the invention, and that ordinary meaning does not include the shape features asserted by the Examiner.

As to (a), the special meaning of the "disk-like configuration" description of the platen is at specification page 16, lines 10-19. There, it is said that the platen has a "central section 110 having a disk-like configuration ...shaped to correspond to the shape of the wafer...". Thus, as to (b), the central section 110 of the platen 100 does not have any possible shape, but instead is defined with a special meaning, namely the central section 110 is defined as having a shape that corresponds to the shape of the wafer. Further, the special meaning is made more specific by the central section description at page 16, lines 15-17, namely by the description:

> "The central section 110...extends inwardly to the center from the entire perimeter of a circular raised surface at the periphery of the central section, ..."

As to (c), the ordinary meaning of the wafer is defined in the written description at specification page 4, lines 8+ in a manner consistent with the quoted "...central section 110...extends inwardly to the center from the entire perimeter of a circular raised surface at the periphery of the central section...". In detail, the wafer is described as having a peripheral edge "...which is an edge of a perimeter that extends circularly around the wafer."

If there is still any question as to what is the definition of the "wafer" that provides a basis for the definition of the central section of the platen, the dictionary noted below gives a definition consistent with the inventors' definition in the written description. For example, The Random House Dictionary of the English Language, 1966 Edition, defines "disk" as

> "n. 1. any thin, flat, circular plate or object. 2. any surface that is flat and round, or seemingly so." (see Attachment I)

Moreover, a dictionary-type definition in the pertinent text "Microelectronic

Circuits", by Sedra and Smith, 2nd Edition, 1987, at page A-2 defines "wafer preparation" as including:

> "The starting material for modern integrated circuits is very-high-purity silicon. The material is grown as a single crystal. It takes the shape of a solid cylinder...This crystal is then sawed ....to produce wafers 10 to 12.5 cm. in diameter and 200..."

microns thick. See Attachment II. Thus, the Sedra and Smith text defines the wafer as a thin (200 microns) flat (sawn) circular (sawn from the solid cylinder) object.

It is respectfully submitted that the foregoing is adequate evidence that the description of the present application enables one skilled in the art to practice the claimed invention using a disk-like configuration of a central section of a platen, and that the claims that include the "disk-like" text are definite, because (I) the circular central section of the platen is properly and adequately described in relation to the "disk-like" configuration, and (II) there is no evidence of record that indicates that the ordinary meaning of "a disk-like configuration" is properly interpreted to include "other shapes beside circular shape", or that indicates that the ordinary meaning of "Disk-like configuration" would properly include shapes such as oval, triangle, square, or rectangular. The rejection relies only on unsupported assertions as the basis for extending the described "disk-like configuration" beyond the clear special meaning set forth in the written description with respect to the central circular section of the platen, and beyond the ordinary meaning of the cited dictionary definitions. Moreover, that special meaning is not inconsistent with the ordinary meaning of "disk" in the referenced Random House dictionary, and is not inconsistent with the "wafer" shape as defined in the Sedra and Smith text definition of wafer. In this situation, the asserted lack of enabling for those shapes other than circular, and the asserted indefiniteness of the claims, are both based on unsupported assertions, and are respectfully believed to be inadequate bases for the rejections.

It is respectfully requested that if these rejections are again asserted, the rejections expressly indicate each of the following:

1) how the inventors have not given special meaning to the configuration of the central section of the platen,

2) how the ordinary meaning of the specification description at page 16 of "The central section 110...extends inwardly to the center from the entire perimeter of a

circular raised surface at the periphery of the central section, ..." is inconsistent with the ordinary meaning of "disk" in the Random House Dictionary definition of "disk" as "n. 1. any thin, flat, circular plate or object. 2. any surface that is flat and round, or seemingly so.", and

3) a specific proper source showing that the ordinary meaning of a "a disk-like configuration" of a wafer includes shapes beside a circular shape, and specifically includes shapes such as oval, triangle, square, or rectangular.

In view of these remarks and the written description to which reference has been made, it is believed that only by ignoring such written description, and only by ignoring the cited ordinary meanings, and only by relying on the unsupported "can be interpreted to have other shapes" and "can be other shapes" assertions, would one conclude that the recitations in claims 1-17 include the asserted platen central section shapes other than the above-noted described circular shape of the claimed "disk-like configurations" of the central section. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested. Further, in view of the lack of citation of art against claims 1-17, allowance of claims 1-17 is respectfully requested.

Response To Paragraphs 2, 4 and 5: Claims 9-17: Without detracting from the arguments made above with respect to Paragraphs 2, 4 and 5 of the Action, and without admitting the correctness of the rejections discussed above, but instead to advance the prosecution, claim 9 has been amended. The amendments delete the references to "disk-like", and instead refer to the wafer having a wafer configuration and to the platen as having a main surface having a configuration corresponding to that of the wafer. Because the above rejections were based on the presence in claim 9 of the now-deleted "disk-like" phrases; it is believed that the amendments to claim 9 avoid the rejection of claims 9-17 based on 35 USC Paragraphs 1 and 2, and consideration of amended claims 9-17 as avoiding these rejections is respectfully requested. Further, allowance of amended claims 9-17 is respectfully requested.

Claims 18-25: Appreciation is expressed for the allowance of claims 18-25.

In view of these remarks, a Notice of Allowance is respectfully requested.

If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6900, x 6908. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P468). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,

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Attachments to Amendment and Response:
Attachment I (3 pages) and Attachment II (3 pages)

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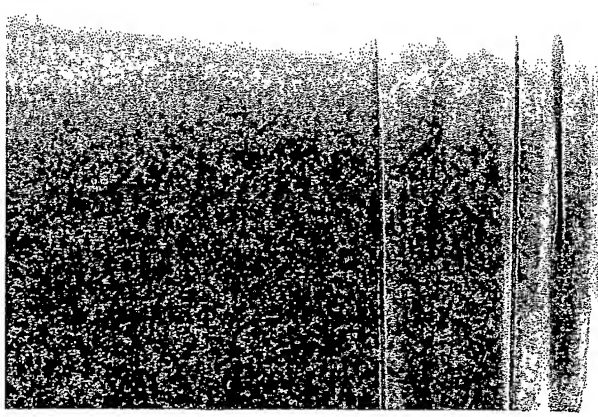
THE RANDOM HOUSE DICTIONARY of the ENGLISH LANGUAGE The Unabridged Edition



ATTACHMENT I

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asserting either that at least one of a number of alternatives is true (**inclusive disjunction**), or that one and only one of a number of alternatives is true (**exclusive disjunction**). **b.** the relation between the terms of such a proposition. [late ME *disjuncciоun* < L *disjunctiōn-* (s. of *disjunctiō*) separation, equiv. to *disjunct(us)* (see DISJUNCT) + *-iōn-* -ION]

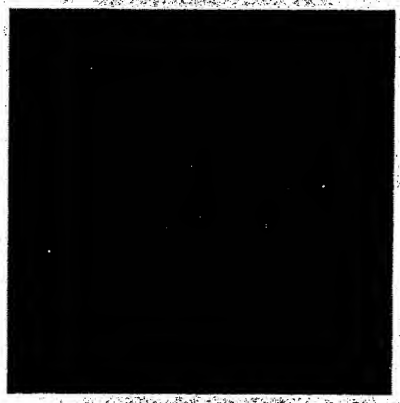
dis·junc·tive (dis jungk′tiv), *adj.* **1.** serving or tending to disjoin; separating; dividing; distinguishing. **2.** *Gram.* **a.** syntactically setting two or more expressions in opposition to each other, as *but* in *poor but happy*, or expressing an alternative, as *or* in *this or that*. **b.** not syntactically dependent upon some particular expression. **3.** *Logic.* **a.** characterizing propositions which are disjunctions. **b.** (of a syllogism) containing at least one disjunctive proposition as a premise. —*n.* **4.** a statement, course of action, etc., involving alternatives. **5.** *Logic.* disjunction (def. 2a). [ME < LL *disjunctīv(us)* placed in opposition, equiv. to L *disjunct(us)* (see DISJUNCT) + *-īvus* -IVE] —**dis·junc′tive·ly**, *adv.*

dis·junc·ture (dis jungk′chər), *n.* the act of disjoining or the state of being disjoined. [ME < ML *disjunctūr(a)*, equiv. to L *disjunct(us)* (see DISJUNCT) + *-ūra* -URE]

dis·june (dis jo͞on′), *n.* *Scot. Obs.* breakfast. [ME (Scot dial.) *disiune* < OF *desjeun*, deriv. of *desjeuner* to break one's fast; see DINE]

disk (disk), *n.* **1.** any thin, flat, circular plate or object. **2.** any surface that is flat and round, or seemingly so: *the disk of the sun*. **3.** a phonograph record. **4.** *Bot., Zool.* any of various roundish, flat structures or parts. **5.** See **intervertebral disk**. **6.** *Bot.* (in the daisy and other composite plants) the central portion of the flower head, composed of tubular florets. **7.** *Math.* the domain bounded by a circle. **8.** *Archaic.* discus. —*v.t.* **9.** to make (a recording) on a phonograph disk. **10.** to cultivate (soil) with a disk harrow. Also, **disc**. [< L *disc(us)* DISCUS] —**disk′like′**, *adj.*

crank having the form of a



Microelectronic Circuits

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ATTACHMENT II

TO
DORIS, PAUL AND MARK
LAURA AND PECAN
for their love,
patience, and understanding

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INTEGRATED-CIRCUIT PROCESSES

The basic processes involved in the fabrication of integrated circuits will be described in the following sections.

Wafer Preparation

The starting material for modern integrated circuits is very-high-purity silicon. The material is grown as a single crystal. It takes the shape of a solid cylinder 10 to 12.5 cm in diameter and 1 m in length, which is steel gray in color. This crystal is then sawed (like a loaf of bread) to produce wafers 10 to 12.5 cm in diameter and 200 μm thick (a micrometer or micron is a millionth of a meter). The surface of the wafer is then polished to a mirror finish.

The basic electrical and mechanical properties of the wafer depend on the direction in which the crystal was grown (crystal orientation) and the number and type of impurities present. Both variables are strictly controlled during crystal growth. Impurities can be added on purpose to the pure silicon in a process known as *doping*. Doping allows controlled alteration of the electrical properties of the silicon, in particular the resistivity. It is also possible to control the type of carrier used to produce electrical conduction, being either holes (in *p*-type silicon) or electrons (in *n*-type silicon). If a large number of impurity atoms is added, then the silicon is said to be heavily doped. When designating relative doping concentrations on diagrams of devices, it is common to use + and − symbols. Thus a heavily doped (low-resistivity) *n*-type silicon wafer would be referred to as n^+ material. This ability to control the doping of silicon permits the formation of diodes, transistors, and resistors in integrated circuits.

Oxidation

Oxidation refers to the chemical process of silicon reacting with oxygen to form silicon dioxide. To speed up the reaction, it is necessary to heat up the wafers to the 1000 to 1200°C range. The heating is performed in special high-temperature furnaces. To avoid the introduction of even small quantities of contaminants (which could significantly alter the electrical properties of the silicon), it is necessary to maintain an ultraclean environment for the processing. This is true for all processing steps involved in the fabrication of an integrated circuit. Specially filtered air is circulated in the processing area, and all personnel must wear special lint-free clothing.

The oxygen used in the reaction can be introduced either as a high-purity gas (referred to as a "dry oxide") or as water vapor (forming a "wet oxide"). In general, a wet oxide has a faster growth rate, but a dry oxide has better electrical characteristics. The oxide layer grown has excellent electrical insulation properties. It has a dielectric constant of about 3.5, and it can be used to form excellent capacitors. It also serves as a good mask against many impurities. It can therefore be used to protect the silicon surface from contaminants. It can also be used as a masking layer, allowing the introduction of dopants into the silicon only in regions that are not covered with oxide. This masking property is what permits the convenient fabrication of integrated circuits.